

METHOD FOR MANUFACTURING AND STRUCTURE OF SEMICONDUCTOR
DEVICE WITH POLYSILICON DEFINITION STRUCTURE

ABSTRACT

In accordance with a particular embodiment of the present invention, a method for manufacturing a semiconductor device includes forming a buried layer of a semiconductor substrate. An active region is formed adjacent at least a portion of the buried layer, and an isolation structure is formed adjacent at least a portion of the active region. A gate oxide is formed adjacent at least a portion of the active region. The method also includes forming a polysilicon layer adjacent at least a portion of the gate oxide. At least a portion of the polysilicon layer is removed to form a polysilicon definition structure. The polysilicon definition structure at least substantially surrounds and defines an emitter contact region. The method also includes forming an implant region of the emitter contact region, wherein the implant region is self-aligned.